

ABSTRACT

METHOD AND APPARATUS FOR CONTROLLED CONTRACTION OF COLLAGEN TISSUE

5 A method and apparatus applies radiant energy through the skin to
underlying collagen tissue without substantially modifying melanocytes and other
epithelial cells in the epidermis. A membrane is adapted to receive an electrolytic
solution and become inflated to substantially conform a contacting exterior surface
of the membrane to a skin layer. The membrane includes a cooling lumen for
receiving cooling fluid. One or more thermal electrodes positioned in the
membrane and transfers thermal energy to the electrolytic solution. The
10 electrolytic solution and cooling fluid creates a reverse thermal gradient from the
skin surface to the underlying collagen tissue. A thermal power source is coupled
to the thermal electrodes, and a source of electrolytic solution is coupled to the
membrane.

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